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Working Paper

Integrating the Eastern Länder : how long a transition?

Kieler Diskussionsbeiträge, No. 229

Provided in cooperation with:
Institut für Weltwirtschaft (IfW)

Suggested citation: Siebert, Horst (1994) : Integrating the Eastern Länder : how long a transition?, Kieler Diskussionsbeiträge, No. 229, http://hdl.handle.net/10419/797

KIELER DISKUSSIONSBEITRÄGE

KIEL DISCUSSION PAPERS

229

Integrating the Eastern Länder: How Long a Transition?

by Horst Siebert

CONTENTS

- In the 1990s, the economic policy situation in Germany will be determined by how quickly eastern Germany catches up. This will determine the extent of transfers and, consequently, Germany's fiscal policy stance, which, in turn, will influence the macroeconomic policy mix and the growth potential in western Germany.
- Adjustment in eastern Germany is making progress. Privatization of the enterprise sector has nearly been completed. In the privatized firms, a restructuring process is under way, thus laying the foundations for future competitiveness. The producing sector has come close to the production level of the second half of 1990. In the nontradables sector, the adjustment process is proceeding smoothly. In the tradables sector, i.e., in industry, things do not look so bright. An export basis has not yet been established.
- Self-sustaining growth with sufficient momentum and independent of public transfers has not yet taken place. However, investment is developing positively. The investment ratio is more than 50 percent of GDP. More than 80 percent of investment has taken place in the enterprise sector (including telecommunications, railroads, and housing); government investment is not playing the major role.
- GDP per capita in eastern Germany rose from 28.8 percent of the western German level in 1991 to 40.7 percent in 1993. How quickly the adjustment process will come about will depend on investment, because capital accumulation must be the engine of the catching-up process. A simple formula tells us which growth differentials and how much time will be needed if eastern Germany is to reach the level of certain regions in western Germany. Assuming annual eastern German growth is 5 percent higher than western German growth, it will take eastern Germany until the year 2007 to reach an 80 percent adjustment target. Assuming a growth differential of 10 percent, this will take until the year 2000.
- Reunification has changed the characteristics of Germany as a whole. With an increase in the share of government in GDP from 45 to 52 percent Germany has become a little less of a market economy and a little more of a state economy. The economic system has become less efficient, and this dampens the potential growth rate of western Germany. In this situation, it is of paramount importance to reduce the budget deficit. This task will be easier if eastern Germany proceeds to catch up quickly, because, then, Germany will simply "grow" out of its fiscal policy dilemma.

INSTITUT FÜR WELTWIRTSCHAFT KIEL · APRIL 1994

ISSN 0455-0420

Contents

Revised and updated version of a paper presented at the Fifth Meeting of the Germany-United States Economic Policy Group in Frankfurt on January 22, 1994. This paper is a sequel to my previous Kiel Discussion Papers: "The Economic Integration of Germany" (No. 160, May 1990), "The Economic Integration of Germany — An Update" (No. 160a, September 1990), "Five Traps for German Economic Policy" (No. 185, April 1992), and "German Unification and Its Impact on Net Savings" (No. 216, April 1993). I appreciate comments from Michael Hoffmann, Lars Kumkar, Petra Naujoks, Birgit Sander, and Klaus-Dieter Schmidt.

Die Deutsche Bibliothek - CIP-Einheitsaufnahme

Siebert, Horst:
Integrating the Eastern Länder : how long a transition? / By Horst Siebert. Institut für Weltwirtschaft. - Kiel : Inst. für Weltwirtschaft, 1994
(Kieler Diskussionsbeiträge ; 229)
ISBN 3-89456-069-X
NE: GT

ISSN 0455 - 0420

Integrating the Eastern *Länder*: How Long a Transition?

In the medium and in the long run, the core of the German economic policy situation is defined by how quickly eastern Germany will catch up. This will determine the extent of transfers needed and, consequently, Germany's fiscal policy stance, which, in turn, will influence the growth potential in western Germany via taxation and which is a cornerstone of the macroeconomic policy mix between fiscal, monetary, and wage policy. Therefore, one of the central questions of German economic policy in the 1990s will be how the transition process is proceeding in eastern Germany.

I. Progress in Adjustment

Privatization of the previously state-owned firms has nearly been completed, with only 237 firms out of 13,500 still to be privatized (March 1994). Less than 100,000 employees of originally 4 million in the Treuhand firms are involved (Table 1). Sectors in which privatization is still a major task include the chemical industry, iron and steel, the mechanical engineering industry, and vehicle construction (railroad cars, road vehicles). In the mechanical engineering industry, the Treuhand Agency will use the concept of the "management firm," which serves as a holding and privatization company for some ten firms still to be privatized. In the mining industry, privatization has just been concluded. The Treuhand Agency has privatized basically the whole enterprise sector of the eastern German economy within three years. It is reasonable to assume that in the privatized firms the restructuring process now under way has laid the foundations for future competitiveness.

Table 1 — Number of Employees in Treuhand Enterprises[a] by Industries

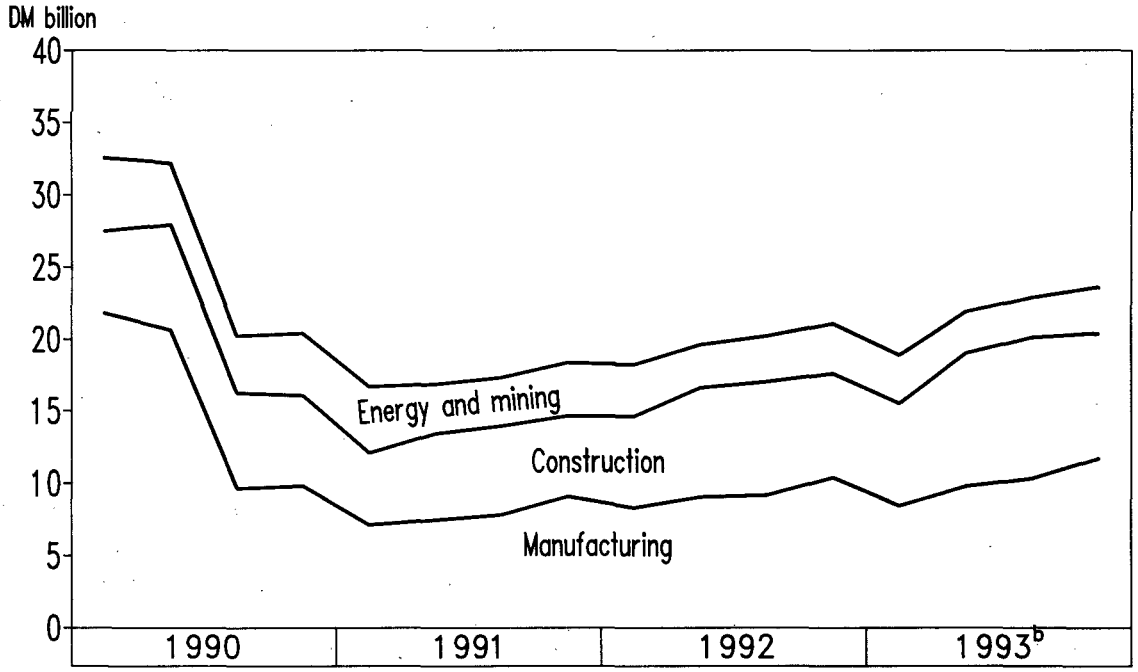
Industry		Industry	
Mining	27,187	Energy and water supply	628
Chemical industry	15,396	Transport, storage, and communications	608
Mechanical engineering	12,578	Stone, sand and clay industries,	
Manufacture of structural metal products	10,848	manufacture of nonmetallic mineral	
Ferrous and nonferrous metals, foundries	5,176	products	526
Electrical engineering, electronics	4,807	Leather and footwear	146
Textile and wearing apparel	3,559	Precision engineering, optics	108
Services	2,280	Food, beverages, and tobacco	44
Construction industry	1,929	Fabricated metal products, recreational	
Trade	1,304	equipment	16
Wood and wood products	1,082	Agriculture and forestry	0
Vehicle construction	987	Fitting-out and construction-related trade	0
Rubber and plastic products	920	Others	662
Paper, paper products, and printing	761	Total	91,552

[a]Firms for sale, i.e., total holdings minus firms that are to be liquidated minus firms for which privatization is under way.

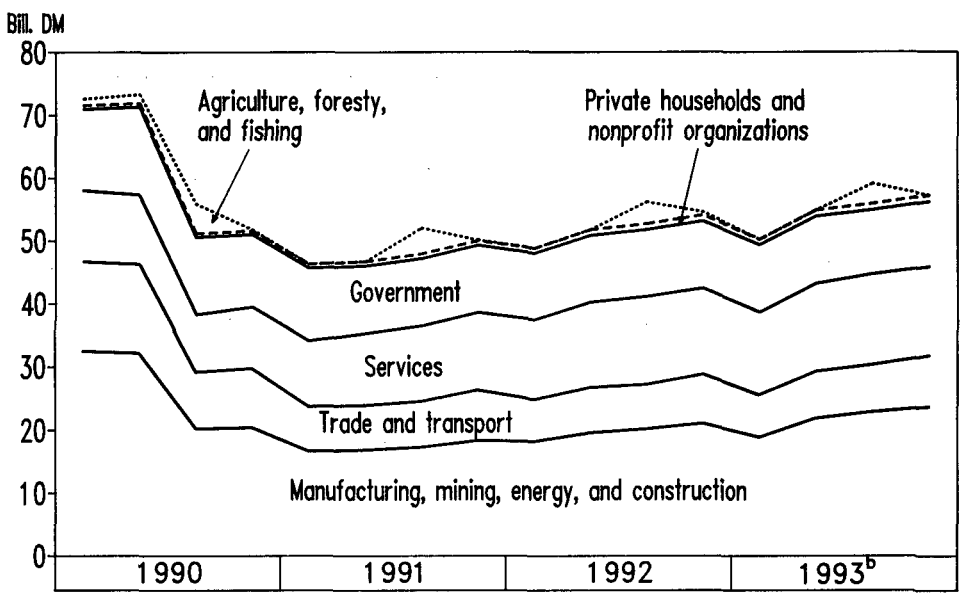
Source: Personal communication, the Treuhandanstalt, March 1994.

Figure 1 — Gross Domestic Product[a] in Eastern Germany, 1990–1993

a) GDP in the Producing Sector



b) GDP by Sector



[a] In 1991 prices. – [b] Partly estimated.

Source: DIW [1993].

In the last quarter of 1993, the producing sector, which comprises energy, mining, manufacturing, and construction, actually came close to the production level of the second half of 1990; it surpassed it slightly in October (Figure 1a, for more details see Table 2). Especially in the production of local and regional goods, that is, in the nontradables sector, the adjustment process is proceeding smoothly. This holds for construction and for the construction-related industries, for the crafts, and for the service sector. The contribution of these sectors to GDP is rising (Figure 1b). In construction and construction-related industries such as stone, sand, and clay, and manufacture of structural metal products the output index has surpassed its level of the second half of 1990 by 150 percent.

In the tradables sector, however, especially in the capital goods sector, things do not look so bright. It is proving extremely difficult for eastern German firms to establish themselves in western German and international markets, to develop the right product for a market niche, and to break into existing relations between buyers and sellers. In addition, the economic prospects of the tradables sector have been dimmed by the recession in western Germany. An export basis has not yet been established.

In the last quarter of 1993, the output index in manufacturing stood at 78 percent of the level in the second half of 1990. In the capital goods industry, the output index only reached 64.2 percent of its original level. In the electrical engineering industry, the output index was at 60.1 percent. The mechanical engineering industry (37.0) and the optical industry (including precision engineering and watches) (26.3) had even lower output levels. These data clearly indicate a deindustrialization of the eastern German economy.

The deindustrialization of eastern Germany, having at its root the inefficiency and obsoleteness of the capital stock inherited from the socialist planning system, was aggravated by two factors: by the conversion rate of 1:1 between the ostmark and the D-mark, which represented an appreciation of the ostmark of about 400 percent, and by wage policy (see below). Furthermore, transfers from western Germany have superimposed a Dutch-disease phenomenon. Transfers to households have stimulated demand for nontradables; the nontradables sector has attracted capital and qualified labor and has driven up factor costs (wages) in the tradables sector.

The eastern German experience reminds us that a supply response needs time. In addition, a major issue has been to what extent bottlenecks in eastern Germany have hindered investment and have prevented the growth process from starting and gaining momentum. These bottlenecks have been the uncertainty with respect to property rights, an administrative system that had (and still has) to be built up, an insufficient infrastructure in communications and transportation, and — what is very important — delays in administrative and political decisions, especially when different layers of government have to interact. Over time, some of the factors limiting growth have become less important.

In the restitution of private property, such as houses and lots, 28 percent of the 2.7 million privatization applications have been resolved (September 30, 1993). In 1993, property rights problems were not an issue in the privatization of firms. But they are still relevant in the housing sector, and consequently for the development of the inner cities.

Table 2 — Net Production[a] of the Producing Sector in Eastern Germany[b] (change against previous year in percent)

	1992				1993				*Note*	
	I	II	III	IV	I	II	III	IV	Index for IV 93	Weight[c] for IV 93
Total producing sector	–5.4	3.7	5.4	5.1	0.8	8.5	9.1	13.1	95.1	100
Energy	–16.7	–6.3	–0.2	0.6	4.3	6.7	5.9	22.6	128.4	16.7
Mining	–38.1	–28.3	–17.5	–23.8	–25.6	–12.9	–34.3	–14.7	41.2	4.1
Total Manufacturing	–4.1	–2.1	–3.4	0.1	–1.1	9.5	14.8	11.1	77.8	49.0
Manufacture of basic goods	4.8	13.6	2.1	–5.1	–7.2	8.3	20.6	14.1	89.8	10.8
of which:										
Oil refineries	4.4	15.1	4.4	1.6	–0.6	0.5	6.6	–2.1	133.6	1.8
Stone, sand, and clay industries	60.5	51.4	57.7	53.8	26.9	50.1	47.8	35.2	150.8	4.0
Iron and steel industry	–25.7	–10.8	–8.2	15.4	10.3	–24.3	11.1	3.2	62.2	0.4
Foundries	–19.5	–19.4	–26.3	–28.7	–26.2	–22.4	–3.5	0.8	35.8	0.3
Chemical industry	4.5	2.7	–24.6	–39.1	–34.6	–14.0	7.3	3.6	60.1	2.5
Manufacture of capital goods	–13.1	–14.1	–11.7	–0.3	0.2	9.9	13.3	10.1	64.2	22.2
of which:										
Manufacture of structural metal products	48.3	22.0	23.0	25.9	12.1	7.3	15.0	18.1	186.3	5.8
Mechanical engineering	–26.5	–39.8	–44.8	–36.0	–27.8	–2.0	12.1	7.9	37.0	5.9
Road vehicle construction[d]	–29.5	–0.2	19.8	77.5	70.1	65.7	63.9	27.1	97.2	2.7
Electrical engineering[d]	–14.2	–2.3	3.3	13.9	5.7	9.2	–0.4	4.7	60.1	5.4
Precision engineering, optics, watches	–64.7	–7.2	79.9	207.6	38.8	–12.4	–31.2	–50.3	26.3	0.3
Metal products	11.3	12.2	14.2	5.4	–0.3	9.0	10.8	7.2	130.2	1.5
Manufacture of consumer goods	7.7	8.9	4.8	3.1	4.7	13.7	19.7	14.2	89.9	6.8
of which:										
Wood processing	2.8	2.9	3.2	8.7	5.7	23.1	32.2	26.9	113.1	1.8
Printing	42.7	28.5	17.0	6.5	7.6	7.8	2.3	–11.0	134.0	2.5
Textiles	–26.9	–19.3	–30.0	–24.6	–18.3	–11.6	8.6	11.8	34.0	0.6
Manufacture of food, beverages, and tobacco	–0.1	3.0	6.9	6.1	–0.8	7.1	8.1	7.3	106.4	9.4
Food and beverages	10.6	12.4	14.2	9.8	0.1	9.4	11.6	11.8	111.1	8.1
Tobacco	–31.6	–29.0	–15.3	–7.9	–4.4	–5.2	–6.7	–12.9	85.7	1.3
Construction industry	21.4	32.4	32.8	28.1	10.3	11.7	10.0	16.6	157.4	29.9
Building construction	5.6	19.7	24.9	22.2	9.3	3.9	4.8	18.8	147.1	14.4
Civil engineering	42.3	46.0	40.7	33.3	11.4	18.5	14.3	14.9	167.3	15.5

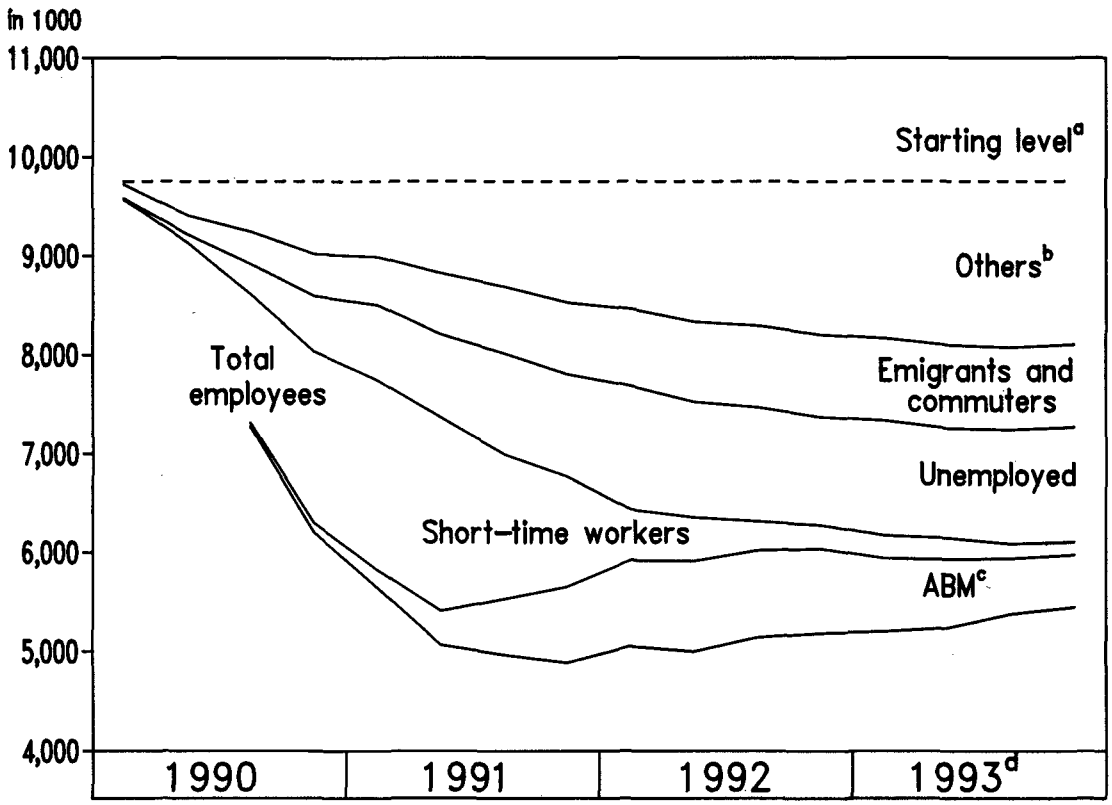
[a]Index of net production of the producing sector, 2nd half 1990=100. — [b]Including eastern Berlin. — [c]Calculated using the index of net production for the producing sector adjusted by working days, multiplied by weights according to the index base (2nd half 1990=100). — [d]Including repair.

Source: Statistisches Bundesamt [1993a, 1994b].

II. The Historic Failure of Wage Policy

Wage policy has been a failure in eastern Germany. At the end of 1993, nominal wages in eastern Germany were at 80 percent of the western German level. Construction-related sectors and some sectors in eastern Berlin reached the western German wage level (although the working hours in these sectors are longer and the vacations shorter). At the end of 1993, other sectors were in the 80 percent range, not only banking (82–85 percent), insurance (83 percent), but also retail trade (82 percent), government (80 percent), and even the sectors with tremendous economic difficulties, the metal and electrical engineering industries and iron and steel, both at 80 percent. In the eastern German economy unit labor costs reached 184 percent of the western German level in 1993, indicating that this region is not competitive in terms of labor costs. Labor's share in national income — which was 72 percent in western Germany — amounted to 106 percent in 1993 [Statistisches Bundesamt, 1994a].

Figure 2 —Employment in Eastern Germany, 1990–1993



[a] Fourth quarter 1989. – [b] For instance, early retirement, hidden reserve. – [c] Employees in job-preserving schemes and retraining programs. – [d] Partly estimated.

Source: Updated version of Figure 2.4 in Siebert [1993a].

The wage increases in eastern Germany have had repercussions in a number of areas. They have made investment less profitable. While they have not greatly affected capital-intensive investment projects of western German or of international firms in eastern Germany, they have had a negative impact on the birth of new and small firms, which are faced with uncertain revenues, since they have not yet established themselves in the market. Furthermore, adjustment of the old state firms has been made more difficult. The demand for labor in the adjustment phase has been reduced, thus leading to higher unemployment and a greater need for government programs and transfers (Figure 2). Moreover, the wage level has influenced social security payments. Thus, wage policy in eastern Germany has directly affected the amount of transfers and the fiscal policy stance in Germany. In the meantime, many of the new smaller firms do not worry about the negotiated wages, which normally are legally or de facto mandatory in Germany. Moreover, there are now some signs that the adjustment of eastern German wages is being stretched over a longer horizon.

III. Re-creating the Capital Stock

A self-sustaining growth process has not yet begun. In 1993, aggregate domestic demand (in 1991 prices) in eastern Germany amounted to DM415.3 billion, in contrast to a GDP of DM212.5 billion. There was a gap of DM203 billion between aggregate domestic demand and GDP (Table 3). This was the trade deficit in 1993. Aggregate domestic demand was financed by government transfers that are estimated at DM150 billion annually for some time to come; in addition there were private capital inflows.

Table 3 — Gross National Product and Gross Domestic Product[a] in Eastern Germany[b], 1990–1993 (billions of Deutsche Mark)[b]

	1990	1991	1992	1993
Gross domestic product	255.2	180.9	198.4	212.5
Private consumption	175.5	179.4	192.5	195.5
Government consumption	88.4	85.6	91.7	94.1
Investment in machinery and equipment	20.5	41.8	46.3	50.1
Investment in construction	44.8	45.3	61.8	74.9
Aggregate domestic demand	309.7	352.3	391.8	415.3
Exports	61.3	46.9	52.9	52.4
Imports	114.6	218.2	246.3	255.2
Gross national product	256.5	190.1	209.7	222.6
Gross value added[c]	253.6	193.4	210.4	224.6
Agriculture, forestry, and fishing	7.4	2.5	3.0	4.2
Manufacturing, energy, mining, and construction	105.4	69.3	79.2	88.0
Trade, transportation, and communications	46.6	29.4	28.5	30.7
Other services	41.2	45.9	53.6	55.0
Government, private households, and nonprofit organizations	53.2	46.4	46.2	46.8

[a]In 1991 prices. — [b]Including eastern Berlin. — [c]Unadjusted.

Source: DIW [1993]; Statistisches Bundesamt [1993b, 1994b].

Table 4 — Gross Fixed Investment in Eastern Germany (billions of Deutsche marks)[a]

	1991	1992	1993
Total	87	108	125.0
Enterprise sector (including housing)	73	90	106.4
Government	14	18	18.6

[a]In 1991 prices; including railroads, postal services, and telecommunications.

Source: Sachverständigenrat [1993, Table 13], Statistisches Bundesamt [1994b].

Self-sustaining growth can only start if the obsolete capital stock is rebuilt from scratch. We know very well from the economics of transition that the shift from a centralized socialist planning system to a market economy presents a shock to the representative socialist firm, changing all its constraints, including the price vector. This implies that the capital stock of the firm becomes obsolete to a considerable degree. This also holds for the capital stock of the economy.

The capital requirements in eastern Germany are high. Assuming that eastern Germany will have the same capital stock per capita as western Germany after the transformation process has ended, the capital stock of the enterprise sector would be DM1,300 billion.[1] This is a back-of-the-envelope calculation for accumulated investment which assumes that the existing capital stock is completely obsolete. Using the infrastructure of western Germany as a frame of reference, infrastructure capital in eastern Germany would amount to DM545 billion after adjustment. This figure includes public buildings and equipment, roads, railroads, postal and communications infrastructure, and waterways. Assuming that one-third of the capital stock is usable, and assuming a ten-year period of adjustment, a rough calculation shows that private investment of DM90 billion and public investment of DM40 billion per year, i.e., DM130 billion per year, would be needed. This figure does not include neither the housing sector nor environmental protection.

Investment will be the decisive variable for the growth process in eastern Germany. It increased from DM87 billion in 1991 and DM108 billion in 1992 to DM125.7 billion in 1993 (all figures in 1991 prices) (Table 4). Private investment accounted for the larger part of total investment. In 1993, investment amounted to 51 percent of GDP.

After real GDP collapsed by 14 and 33 percent in 1990 and 1991, respectively, it increased by 9.7 and 7.1 percent in 1992 and 1993; expectations for 1994 run at 8 percent. It is expected that investment in equipment will rise at the same rate as in 1993. In the long run, if capital accumulation continues, eastern Germany may very well contribute one percentage point to the overall German growth rate.

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1 The total western German capital stock was DM12,687 billion in 1991, that of the enterprise sector DM5,201 billion.

IV. When Will Eastern Germany Catch Up?

How long will the adjustment process last? It is difficult to say. In their empirical cross-country analysis of catching-up-processes in industrial countries, Barro and Sala-i-Martin [1991] found that it takes 15 years to close a growth gap by one-fourth. According to the same study it takes 70 years in order to close three-quarters of the growth gap.

In evaluating the adjustment process it is important to distinguish between different types of capital stock. Capital in the nontradables sector will be installed very quickly. A large part of this capital stock is already in place. However, in the tradables sector, this will take a much longer time. Part of this investment, for instance, direct investment, has been and will be undertaken when profit opportunities are expected; this type of investment will be associated with a negative cash flow initially — a cash-sink hole — which can be incurred because of high expected profits in the future. Other investments will have to be financed through retained earnings requiring that profits are made. This type of investment will only come about over time. Financing investment through retained earnings is especially relevant for the newly founded small firms that must be at the heart of a Schumpeterian process of the growth of firms in eastern Germany. The bulk of infrastructure (roads, telecommunications) will be created quickly, but mega-projects, such as a new airport for Berlin, may only be started at the end of this decade and would need another ten years to be completed. Also new transportation axes need time. Interpreting the spatial structure as a stock variable, adjustment will depend on such mega-projects. Finally, rebuilding the housing stock will take two or three decades.

Of course, very much depends on what level of adjustment is aimed at. Germans always want the 100-percent solution, but in fact, net national income per head varies considerably from region to region in western Germany. Some *Länder* in western Germany reach 80 percent of the western German average. So far, the catching-up that has taken place has not been negligible. GDP per capita (in current prices) rose from 28.8 percent of the western German level in 1991 to 40.7 percent in 1993 (38.8 percent in 1992).

A simple formula tells us how much time is needed for eastern Germany to catch up. Consider a situation where eastern Germany eventually reaches 80 percent of the western German level of GDP per capita. This is not an unrealistic frame of reference, since in western Germany some regions are characterized by a similar percentage.

The results of using this formula depend on the difference in the real growth rates between eastern and western Germany. If the difference in growth rates between east and west were only 1 percent, it would take 67.6 years to reach an adjustment of 80 percent. With a 2-percent differential, the catching

up could require 33.8 years (22.5 years with a 3-percent differential). Table 5 illustrates the potential paths of catching up under different growth differentials between eastern and western Germany.[2]

Table 5 — Catching-up in Eastern Germany under Alternative Growth Differentials[a] (percent)

	Growth differential (percentage points)							
	3	4	5	6	7	8	9	10
1993	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
1994	41.9	42.4	42.8	43.2	43.7	44.1	44.5	45.0
1995	43.2	44.1	45.0	45.9	46.8	47.8	48.7	49.7
1996	44.5	45.9	47.3	48.7	50.2	51.7	53.3	54.9
1997	45.9	47.8	49.7	51.7	53.9	56.1	58.3	60.7
1998	47.3	49.7	52.3	54.9	57.8	60.7	63.8	67.1
1999	48.7	51.7	54.9	58.3	62.0	65.8	69.9	74.2
2000	50.2	53.9	57.8	62.0	66.4	71.3	76.4	82.0
2001	51.7	56.1	60.7	65.8	71.3	77.2	83.6	(6.8)
2002	53.3	58.3	63.8	69.9	76.4	83.6	(7.5)	
2003	54.9	60.7	67.1	74.2	82.0	(8.4)		
2004	56.6	63.2	70.6	78.8	(9.7)			
2005	58.3	65.8	74.2	83.6				
2006	60.1	68.5	78.0	(11.3)				
2007	62.0	71.3	82.0					
2008	63.8	74.2	(13.5)					
2009	65.8	77.2						
2010	67.8	80.3						
2011	69.9	(16.9)						
2012	72.0							
2013	74.2							
2014	76.4							
2015	78.8							
2016	81.2							
	(22.5)							

[a]The figures in parentheses show the number of years needed to reach 80 percent of western Germany's level.

Source: Statistisches Bundesamt [1994b]; own calculations.

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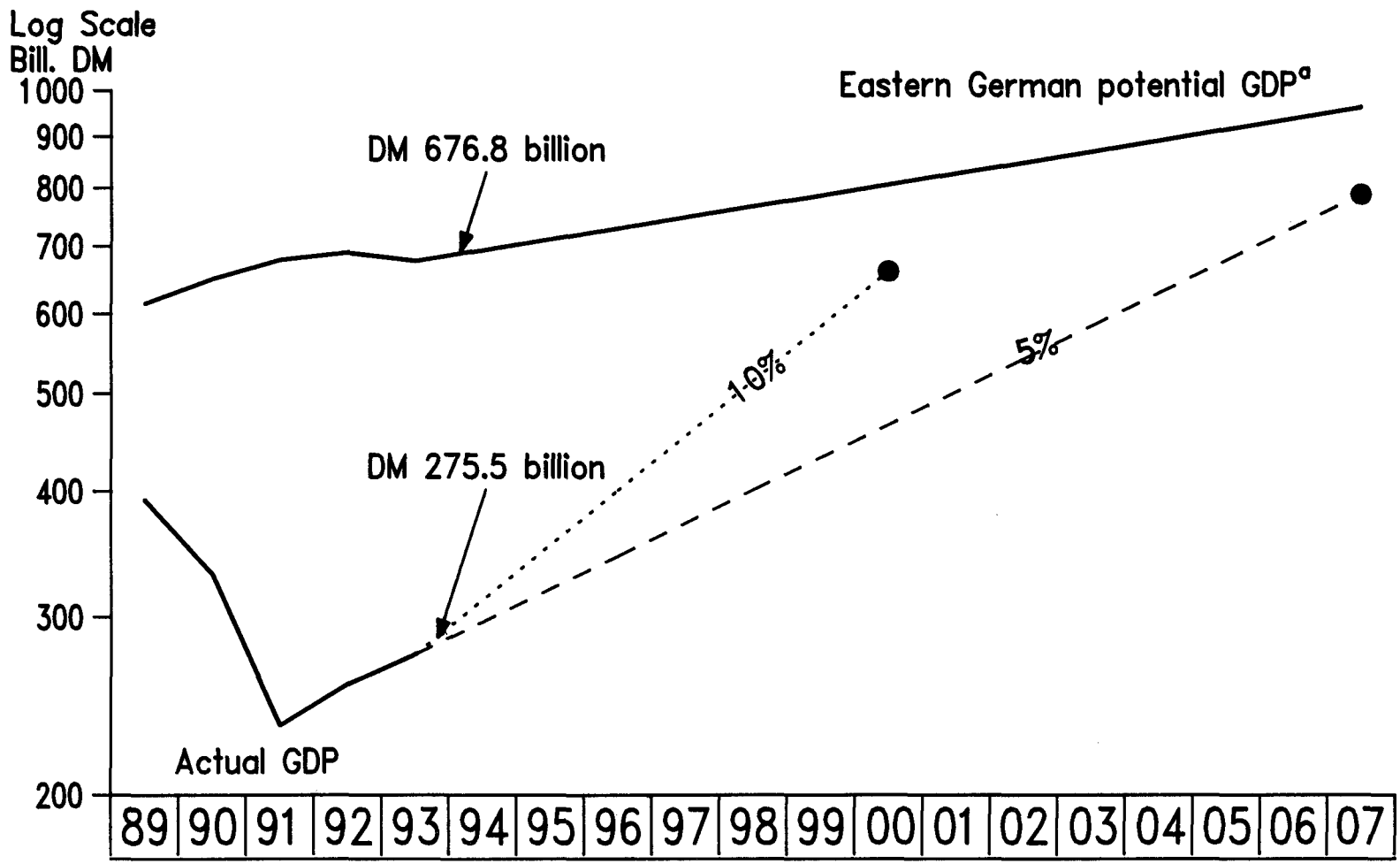
2 Let Y_{93}^{W} and Y_{93}^{E} be the initial GNP in eastern and western Germany, let α be the level to be reached, let $\beta = 0.239$ indicate the size of the eastern German population relative to western Germany, and let r^{W} and r^{E} denote the growth rates, then

$$\alpha\beta\, Y_{93}^{W}\, e^{tr^{W}} = Y_{93}^{E}\, e^{tr^{E}} \qquad \text{and thus} \qquad t = \frac{\ln\left(Y^{E}/Y^{W}\right) - \ln \alpha\beta}{r^{W} - r^{E}} \; .$$

Figure 3 — The Growth Gap in Eastern Germany, 1990–2007



[a] Calculated using the western German GDP, corrected by population size (23.9 percent).

Figure 3 illustrates the closing of the growth gap when alternative growth differences prevail between eastern and western Germany. It has been assumed that western Germany will grow at a potential rate of 2.5 percent. The eastern German growth potential has been estimated by correcting the western German growth potential for the size of eastern German population. For the period 1990–1993, actual GDP data have been used. If the difference in the growth rates were 5 percent, eastern Germany would reach 80 percent of the western German level in GDP per capita in 2007; if the difference were 10 percent, the catching-up would occur in the year 2000. Of course, such mechanistic calculations should not be overestimated. It is realistic to expect that the time profile of investment will not be stretched evenly over the years. There are some reasons that it may be bell-shaped with the greatest momentum in the period 1994–1996 implying higher growth rates of GDP in these years. Figure 3 also illustrates the J-curve effect in the transformation of a socialist economy which is a reflection of the existing capital stock becoming obsolete.

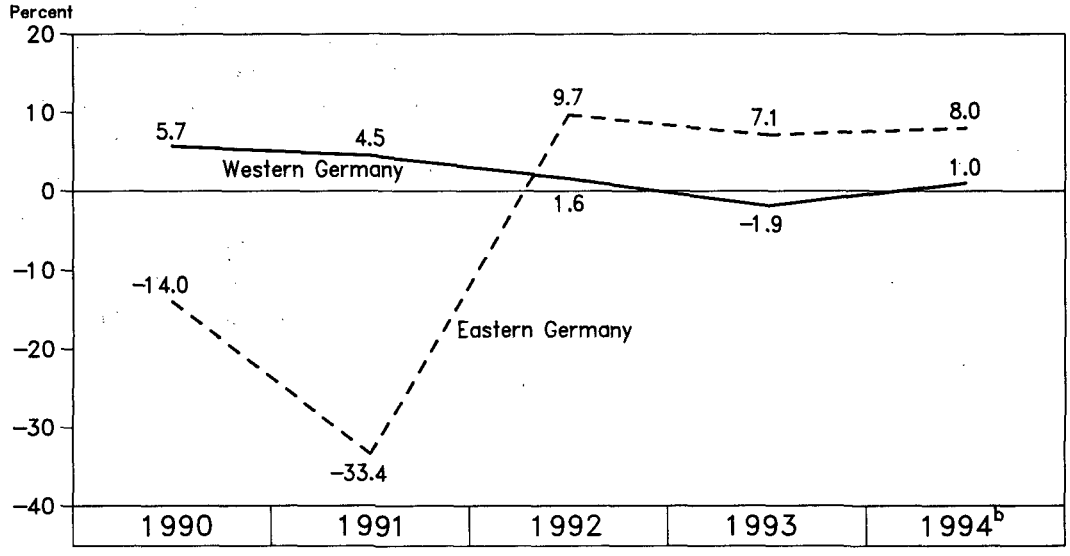
V. Reunification: A Shock to Germany

German reunification can be interpreted as a massive structural change or as an economic shock to Germany as a whole. The shock has created an excess supply of labor and an excess demand for capital to rebuild eastern Germany, both in public infrastructure and in the enterprise sector. Such a structural change requires a shift in relative factor prices, which implies that the relative position of labor has become less favorable. It also implies a relocation of private capital from western to eastern Germany in the transition period. And it mandates governmental transfers, e.g., for financing investments in infrastructure. This affects the fiscal policy stance. Germany is still in the process of finding a new policy mix between fiscal, monetary, and wage policy to deal with this shock.

In addition, it is fascinating to consider whether and to what extent the characteristics of the German electorate have changed due to reunification, for example, whether eastern German voters, on average, have political preferences leaning towards less free market approaches and to what extent they will affect economic policy in united Germany [Hillman, 1994].

The need to finance annual public transfers amounting to 5 percent of GDP has changed the structural characteristics of western Germany. The budget deficit in 1993 was 5.1 percent of GDP for the government (including the federal level, the *Länder* and the municipalities), and it amounted to 7.1 percent of GDP if the Treuhand, the social security system, the railroads, and the postal system are included. Government debt has doubled within five years, climbing from 41 percent to over 60 percent of GDP. The tax burden has been increased; and the government share in GDP has risen from 45 to 52 percent. Germany has become a little less of a market economy and a little more of a state economy. The government's increased demand for resources has created a severe burden for the private sector, indicating that the long-term environment for economic growth in western Germany has become less favorable. The potential growth rate of western Germany has been reduced for the interim period; it is now estimated at 2.5 percent instead of 3 percent for the last years. The recession in 1993 (Figure 4) may have partly been caused by Germany's attempting to find a new policy mix.

Figure 4 — Gross Domestic Product[a] in Eastern and Western Germany, 1990–1994 (change in percent)



Source: Statistisches Bundesamt [1994a].

This situation can only be improved if fiscal policymakers succeed in consolidating the budget situation, in reducing the budget deficit relative to GDP, and in bringing down the tax burden over the coming years.

Germany's fiscal federal system has the principal merit of allowing a decentralization of political decision making and of giving room to regional preferences, but this same system makes a reorientation of fiscal policy in western Germany rather difficult. The *Länder* and municipalities in the west have larger expenditures than the federal government, but the burden of adjustment arising from German reunification has been put on the federal government. The *Länder* and the municipalities in the west have taken only a smaller share in expenditure cuts than the federal government. This is a structural reason why, on the whole, fiscal policy has not reacted with sufficient expenditure cuts or caps on expenditure increases. The federal government therefore had little choice but to resort to tax increases.

VI. Investment Hammering in the Basement

The transition process of eastern Germany is determined by three elements: the initial conditions, the long-run equilibrium and the path to it. In the long run, eastern Germany should reach a stage of development not too different from regions in western Germany or western Europe. In the interim period, the variables discussed such as privatization, restructuring of the firms, wage policy, built-up of the private capital stock, and improvement in infrastructure will, of course, affect the path to the

equilibrium. A very important issue is to what extent the path will influence the characteristics of the long-run solution.

If policymakers in Germany do not make serious mistakes, one can be optimistic and hope that the long-run effects will dominate and that catching-up will be successful. In this context, one is remined of the Hicksian theory of the lower turning point in the business cycle. According to Hicks, a turning point will come about from "autonomous investment hammering in the basement." Capital accumulation in eastern Germany should play a similar role. It should be hammering in the basement...

References

BARRO, R. J., and X. SALA-I-MARTIN, "Convergence across States and Regions." Brookings Papers on Economic Activity, No. 1, 1991, pp. 107–158.

DEUTSCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG (DIW), Sozialprodukt und Einkommenskreislauf. Vierteljährliche volkswirtschaftliche Gesamtrechnung für Ostdeutschland. Berlin, 1993.

DEUTSCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG and INSTITUT FÜR WELTWIRTSCHAFT, "Gesamtwirtschaftliche und unternehmerische Anpassungsfortschritte in Ostdeutschland. Neunter Bericht." Institut für Weltwirtschaft, Kiel Discussion Paper No. 218/219, Kiel, 1993.

HILLMAN, Arye L., "The Transition from Socialism: An Overview from a Political-Economy Perspective." European Journal of Political Economy, forthcoming, 1994.

PAQUÉ, Karl-Heinz, Rüdiger SOLTWEDEL et al., "Challenges Ahead: Long-Term Perspectives of the German Economy." Institut für Weltwirtschaft, Kiel Discussion Paper No. 202/203, Kiel, 1993.

SACHVERSTÄNDIGENRAT ZUR BEGUTACHTUNG DER GESAMTWIRTSCHAFTLICHEN ENTWICKLUNG, "Zeit zum Handeln — Antriebskräfte stärken." Jahresgutachten 1993/94. Stuttgart, 1993.

SIEBERT, H. [1993a], Das Wagnis der Einheit — Eine wirtschaftspolitische Therapie. New edition, Stuttgart, 1993.

— [1993b], "German Unification and Its Impact on Net Savings." Institut für Weltwirtschaft, Kiel Discussion Paper No. 216, Kiel, 1993.

—, "Outlook: Fair with Occasional Storms." Worldlink, World Economic Forum. Davos, 1994.

STATISTISCHES BUNDESAMT, Fachserie 4, Produzierendes Gewerbe. Reihe 2.1, Indizes der Produktion und der Arbeitsproduktivität, Produktion ausgewählter Erzeugnisse im produzierenden Gewerbe. Stuttgart, 1993.

— [1994a], "Bruttoinlandsprodukt 1993." Wirtschaft und Statistik, No. 1, Stuttgart, 1994.

— [1994b], Fachserie 18, Reihe 3, 4. Vj. 1993. Stuttgart, 1994.

TREUHANDANSTALT, "Monatsinformationen." Berlin, 1993.